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EXAMINER
BLACKWELL, JAMES H

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 July 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

   4a) Of the above claim(s) <u>16</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15 and 17-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>24 January 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
                                                               Paper No(s)/Mail Date. _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   5)☐ Notice of Informal Patent Application (PTO-152)
    Paper No(s)/Mail Date _____ .   6)☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is in response to amendment received 07/09/2004.

2.   Claims 1-21 are pending, Claims 1, 14-15, and 17 are independent.

3.   Claim 16 has been cancelled by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-3, 5, 8-17, and 20-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Krulwich et al. (hereinafter Krulwich_1, "The InfoFinder Agent:

Learning User Interests Through Heuristic Phrase Extraction", 09/10 1997, IEEE). In

view of Vaithyanathan et al. (hereinafter, Vaithyanathan, U.S. Patent No. 5,819, 258).

In regard to independent Claim 1 (and similarly independent Claims 15, and

17), Krulwich_1 teaches *identifying a plurality of topics based on the chapter and*

section headings in the documentation, wherein each said topic is associated with a

portion of the documentation in that phrase extraction heuristics (rules), including

recognition of section headings, are used to assist in the categorization of a given

document (p. 25, Col. 1, 3rd paragraph).

Krulwich_1 fails to teach *determining a structure of the documentation, wherein*

said structure indicates a hierarchy of said topics within the documentation. However,

Vaithyanathan teaches a "bottom-up" technique of forming clusters that involves

dividing a set of documents into one of a set of initial categories by examining the

content of the documents. The categories are then examined and groups of categories

are combined to form higher-level clusters or categories using the topics or identifiers.

This proceeds until a hierarchical category structure is produced (Col. 2, lines 58-67).

Hence, Vaithyanathan determines document structure where the structure indicates a

hierarchy of topics. It would have been obvious to one of ordinary skill in the art at the

time of invention to combine the teachings of Krulwich 1 and Vaithyanathan as both

inventions relate to categorizing and classifying documents. Adding the teaching of

Vaithyanathan provides the benefit of providing a structure to the documents allowing

for the determination of subject matter.

Krulwich 1 continues by teaching *classifying each of said topics within one or*

more categories in that the user makes an initial request for documents based on a

category. The system then presents those documents matching the category (Fig. 1).

The user then tells the system whether or not that document represents the subject

matter for which they were searching by selecting an icon of a "smiley face" indicating

that the particular document was acceptable. Once the user has done this, the system

extracts topics from the "sample" documents to learn search query strings that

characterize how to locate similar documents based on the user-defined category (p.

23, left column, Section entitled "Learning User Interests"). Hence, Krulwich 1 allows a

user to classify each document in the sample with a user-defined category based on

how well the extracted topics fit the category. From then on, the system performs a

similar analysis to retrieve further documents which it thinks most likely relates to the
user-defined category.

Krulwich 1 also teaches *receiving a subject for a virtual book* in that the search
query strings determined from the learning mode of the system is based on topics
located within the test documents that are determined to relate to the category the user
had defined (Fig. 6). Hence, the query strings represent the subject matter that will
return a set of documents which if effect produce a virtual book of sorts when taken as a
whole. Thus, Krulwich 1 also teaches *composing said virtual book to include a subset
of said topics that are relevant to said subject, and each said relevant topic includes a
pointer to said associated portion of the documentation* in that the returned documents
as a whole comprise a virtual document or "book" with each of the components linking
back to subject matter.

In regard to dependent Claim 2, Krulwich 1 teaches *searching said topics for a
set of topics relevant to said subject* (p. 23, 2nd paragraph under subject "Learning User
Interests").

In regard to dependent Claim 3, Krulwich 1 fails to teach *said relevant topics
are grouped in said virtual book by said categories*. However, Vaithyanathan teaches
"bottom-up" clustering that groups more specific topics into broader and broader
categories (Col. 2, lines 58-67). It would have been obvious to one of ordinary skill in
the art at the time of invention to combine the teachings of Krulwich 1 and
Vaithyanathan as both inventions relate to categorizing and classifying documents.

Adding the teaching of <u>Vaithyanathan</u> provides the benefit of providing a structure to the documents allowing for the determination of subject matter.

In regard to dependent Claim 5, <u>Krulwich 1</u> teaches *said relevant topics within a first category are listed in the order they occur within the documentation* (see Fig. 2).

In regard to dependent Claim 8, <u>Krulwich 1</u> fails to teach *sorting said relevant topics according to their relevance to said topic.* However, it would have been obvious to one of ordinary skill in the art at the time of invention to modify <u>Krulwich 1</u> to perform the additional step of sorting topics by relevance as doing so would make it easier for the user to determine whether a test document was relevant by providing extracted terms in alphabetical order.

In regard to dependent Claim 9 (and similarly dependent Claim 21), <u>Krulwich 1</u> fails to teach that *said categories include one or more of the set of: concept, task example, reference and troubleshooting.* However, it would have been obvious to one of ordinary skill in the art at the time of invention to conclude that a user would have provided to the learning phase those topics that were of most relevant interest to them, regardless of what those categories are, providing the quickest and most efficient means to obtaining the information they seek.

In regard to dependent Claim 10 (and similarly Claim 20), <u>Krulwich 1</u> teaches *identifying a characteristic of a viewer of said virtual book* in that it is the user that defines the subjects that they are interested in and then assists in the learning of how to recognize those subjects (p. 7, Section "Learning User Interests").

Krulwich_1 also teaches *customizing said virtual book for the viewer* in that once

the system determines search query strings based on the sample input, it retrieves

similar subject matter whose results, taken as a whole, construct a personalized

document (pp. 23-24, Section "Learning User Interests").

In regard to dependent Claims 11-13, Krulwich_1 fails to teach customization

of a virtual book based on characteristics of the user. However, it would have been

obvious to one of ordinary skill in the art at the time of invention to assume that by

declaring the subject matter during the training phase taught by Krulwich_1, that the

user is in fact revealing characteristics about themselves based on how they define their

categories and how they decide whether or not a given test document is relevant to

what they are looking for and their definition of the category term used.

In regard to independent Claim 14, Claim 14 reflects the automated method of

composing a virtual book from a set of electronically stored documentation comprising

multiple books as claimed in Claim 1, and is rejected along the same rationale.

5.   Claims 4, 6-7, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Krulwich_1 in view of Vaithyanathan and in further view of Hoch ("Using IR

Techniques for Text Classification in Document Analysis", Proceedings of SIGIR-94,

17th ACM International Conference on Research and Development in Information

Retrieval", 1994).

In regard to dependent Claim 4, Krulwich_1 fails to teach that *said relevant*

topics within a first category are listed in the order of their relevance to said subject.

However, Hoch teaches determining weights indicating the importance of terms (p. 5, Sec. 2.1). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Krulwich 1 and Hoch as both inventions relate to document classification. Adding the teaching of Hoch helps to determine how relevant a given document is with respect to the subject matter the user is interested in.

In regard to dependent Claims 6 (and similarly Claim 19), and 7, Krulwich 1 fails to teach *identifying index entries in the documentation* or that *said index entries are included in said virtual book*. However, Hoch teaches indexes (see Sec. 2.1, pp. 5-8). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Krulwich and Hoch as both inventions relate to document classification. Adding the teaching of Hoch provides an index in order to quickly locate material.

6.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Krulwich_1 in view of Krulwich (hereinafter, Krulwich_2, "Learning User Interests Across

Heterogeneous Document Databases", AAAI Spring Symposium on Information

Gathering, 1995).

In regard to dependent Claim 18, Krulwich_1 fails to explicitly teach that *a*

network server configured to present said virtual book to a user. However, Krulwich_2

suggests that InfoFinder, though designed to work in a Lotus Notes environment, would

be equally applicable to both Usenet newsgroups, and World Wide Web documents,

both of which require a server (see Footnote 1, p. 1). It would have been obvious to one

of ordinary skill in the art at the time of invention to combine the teachings of Krulwich_1

and Krulwich_2 as both articles relate to the same subject matter. Adding the teaching

of Krulwich_2 helps to further clarify the content of Krulwich_1 in terms of functionality.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-21 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell
06/12/05

WILLIAM BASHORE
PRIMARY EXAMINER

6/12/2005